



City of Wilmington Pedestrian Safety Study

Wilmington Pedestrian Audit

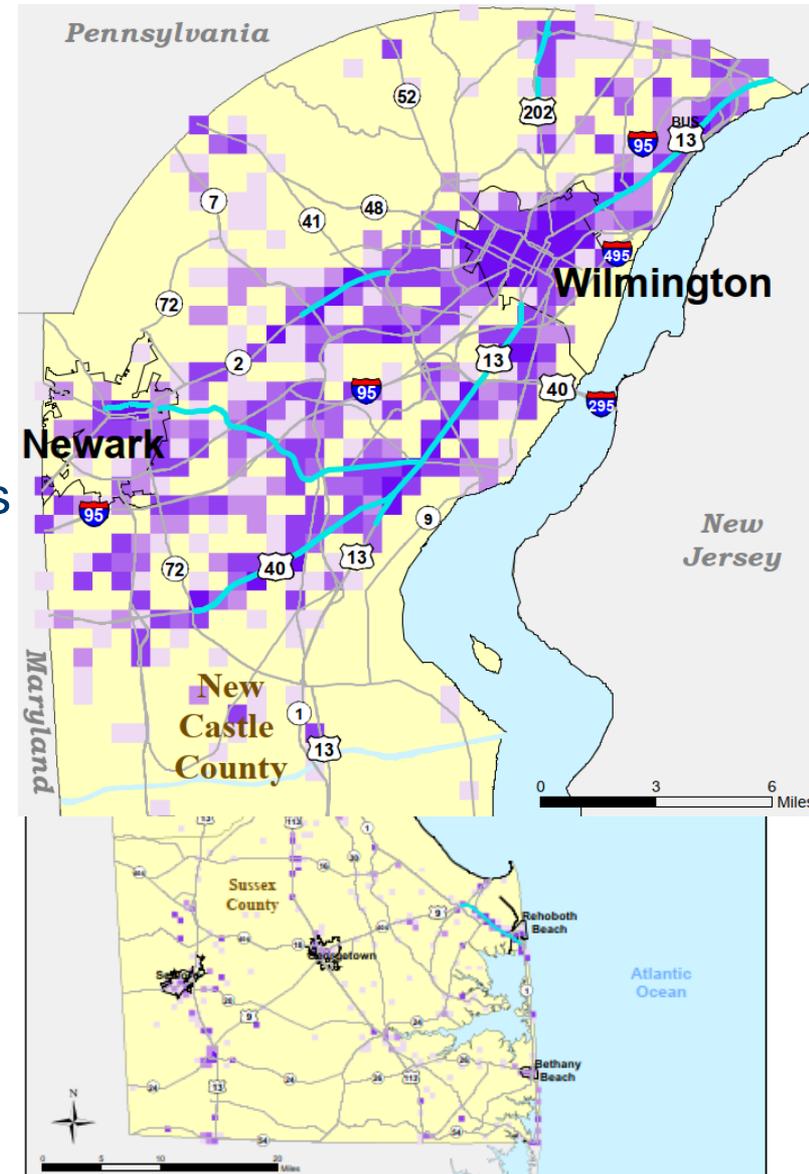
South Market Street: New Sweden Street to 16th Street

July 14, 2023



Purpose of Study

- Why are we here?
 - Improve pedestrian safety within City
 - Improve walking as a mode of transportation
 - Access to jobs
 - Access to recreation
 - Access to economic improvements
 - Major corridors surrounding Wilmington have been studied
 - US 13
 - SR 141
 - US 202
 - Philadelphia Pike
 - Site selection conducted in 2019 pinpoints Wilmington as next logical study location



- Review city-wide pedestrian crash history
- Identify critical corridors and intersections
- Convene stakeholder group
- **Pedestrian safety audits of selected critical corridors and intersections**
- Systemic pedestrian treatments at other locations

Stakeholder Group

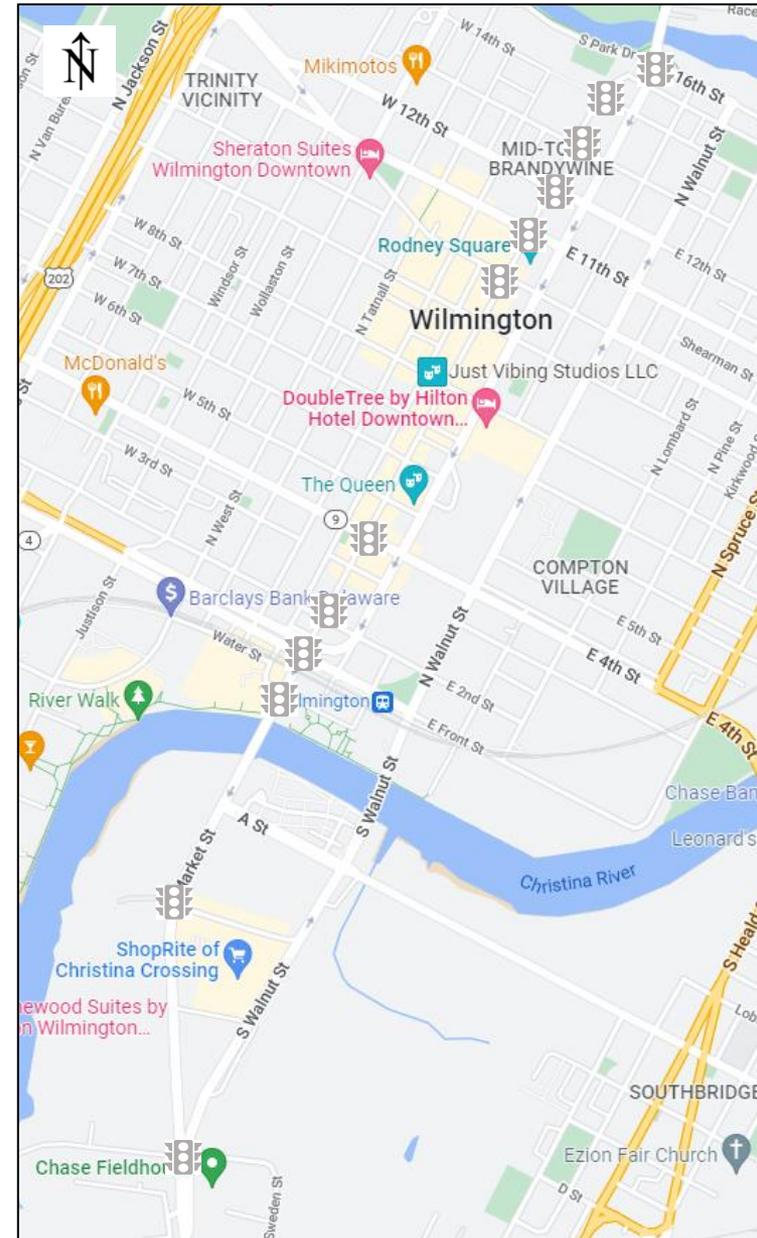
- Peter Haag, DelDOT
- Sonya LaGrand, DelDOT
- Diane Gunn, Century, DelDOT Wilmington Projects Manager
- Paul Moser, DelDOT
- Meaghan Barna, DelDOT
- Aimee String, DelDOT
- Catherine Smith, DTC
- John Calnan, DTC
- Capt. Rodney Layfield, State Police
- Lt. Lance Skinner, State Police
- Richard Klepner, Office of Highway Safety
- Jackie McDermott, Office of Highway Safety
- Stephen Weber, City of Wilmington
- Tom Ogden, City of Wilmington
- Jeff Starkey, City of Wilmington
- Kelly Williams, City of Wilmington
- Sgt. Pete Leccia, Wilmington Police
- Dave Gula, WILMAPCO
- Federal Highway Administration

SOUTH MARKET STREET

HOWARD STREET TO 16TH STREET

South Market Street Corridor

- 1.65-mile Urban Principal Arterial
- 2019 AADT 29,000 – 32,000
 - Data available south of MLK Jr Boulevard only
- One – four through lanes
 - Lane widths between 11 and 12 feet
- Curb-to-curb crossing distances range from 36 – 40 ft, less where bumpouts exist
- Sidewalks and lighting present
- 25-MPH speed limit
- 12 signalized intersections and 7 unsignalized intersections
- Numerous unsignalized mid-block parking lots and driveways

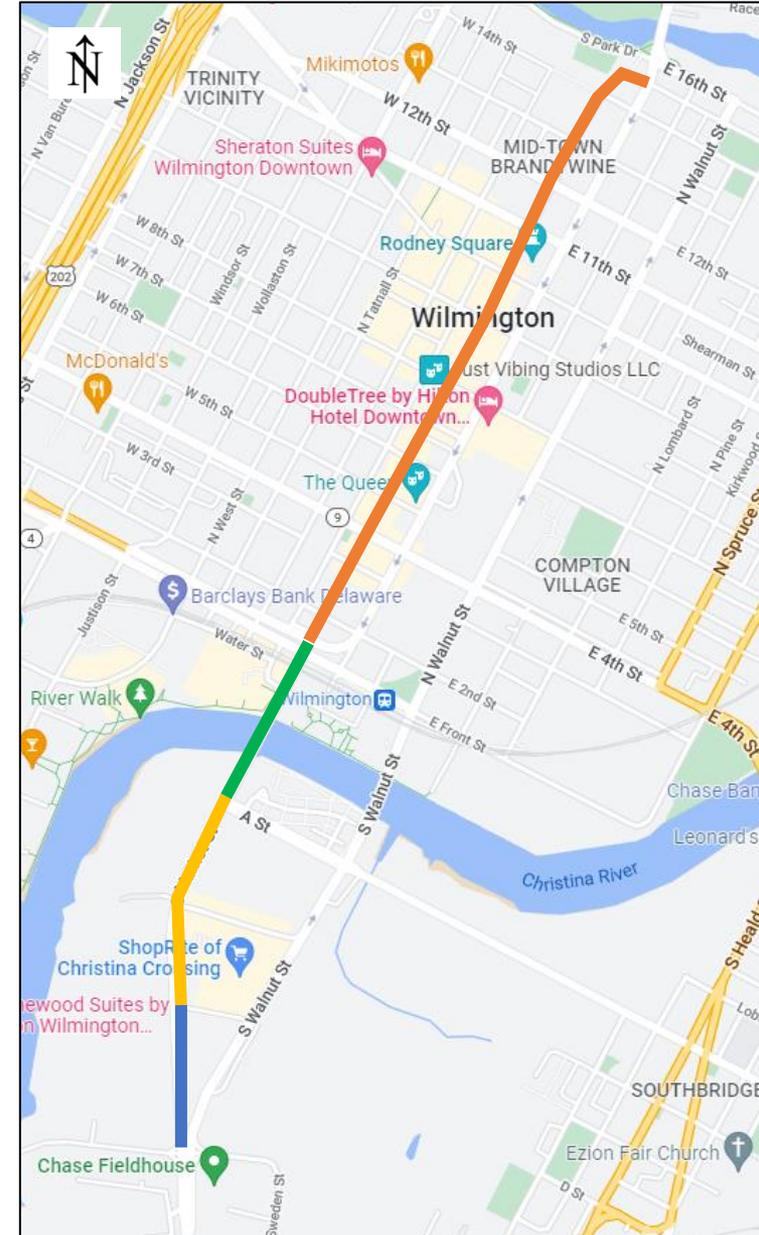


Cross Sections

- South Market Street varies in directionality and number of lanes from Walnut Street to 16th Street

KEY

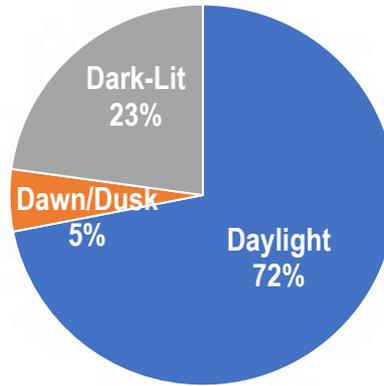
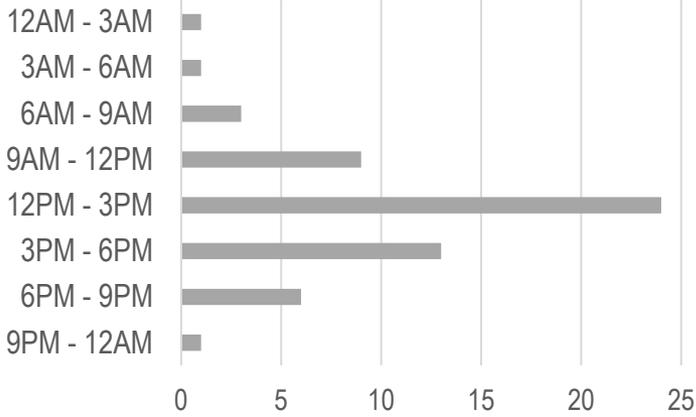
Color	Cross Section Characteristic
Orange	NB and SB – one lane each
Green	SB only – three through lanes
Yellow	SB only – four through lanes
Blue	SB only – two through lanes



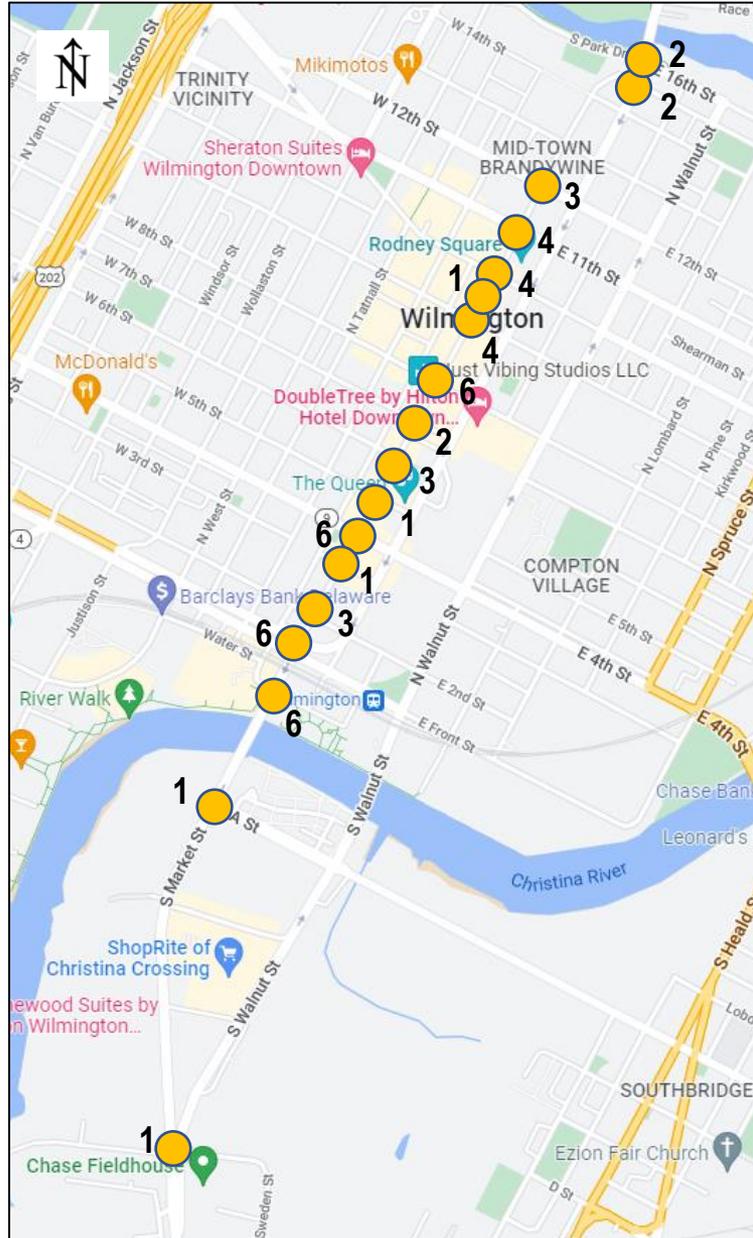
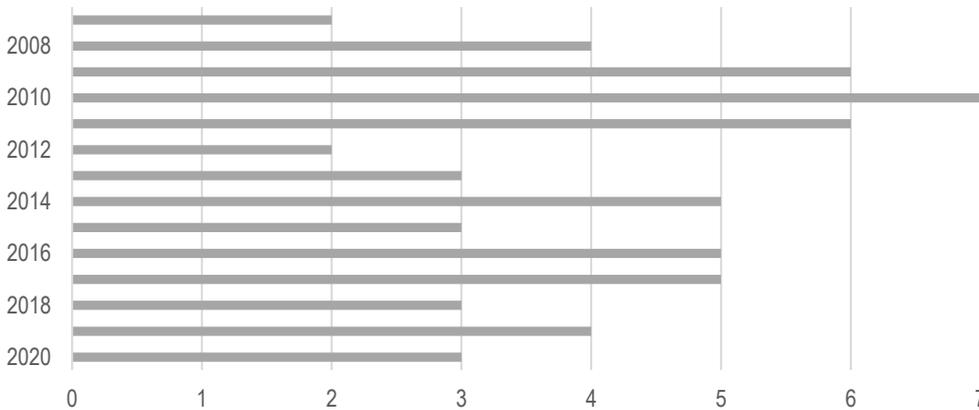
Crash Trends

58 Crashes (2007 – 2020)

Time of Day Crashes



Crashes by Year



South Market Street: New Sweden Street to 16th Street

\$100 million Riverfront East project (*Riverfront Development Corporation*)

- Covers 86 acres and will mirror the established Riverfront with mixed-use development
- The first phase includes construction of a new Riverwalk, roads, greenways, and neighborhood parks
- Currently working through NEPA process as part of RAISE grant
- Completion timeframe to be determined

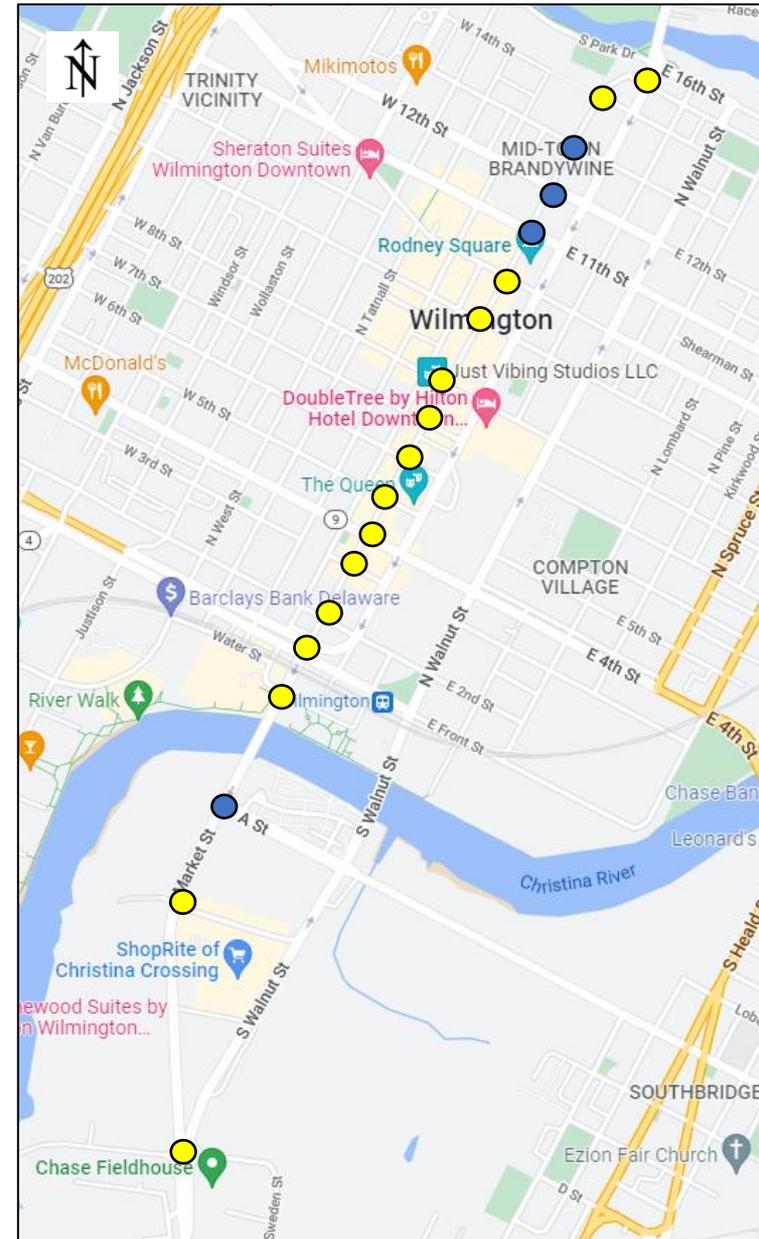


Wilmington Road Diet / Reconfigurations (*DelDOT Project Development / City of Wilmington*)

- Road diet / reconfiguration under consideration for S Market Street between A Street and MLK Boulevard
- No current timelines for design or construction

Lighting Evaluation

- Qualitative driving assessment
- Streetlamps and LED luminaires are common
- Midblock lighting is adequate except between:
 - 14th St and 15 St
 - A St and 0.2 miles north of New Sweden St
- Lighting deficient on four crosswalks:
 - S Market St at A St – East leg
 - S Market St at 11th St – East leg
 - S Market St at 12th St – East leg
 - S Market St at 13th St – East leg
- Streetlamp out on SE corner of South Market Street and 12th Street



South Market Street: New Sweden Street to 16th Street

SIGNALIZED INTERSECTIONS

- **One crash** involving a SB vehicle running over the curb and striking a pedestrian on the sidewalk
- Pedestrian signals on the north, east, and west legs
- New signalized intersection, activated in 2020

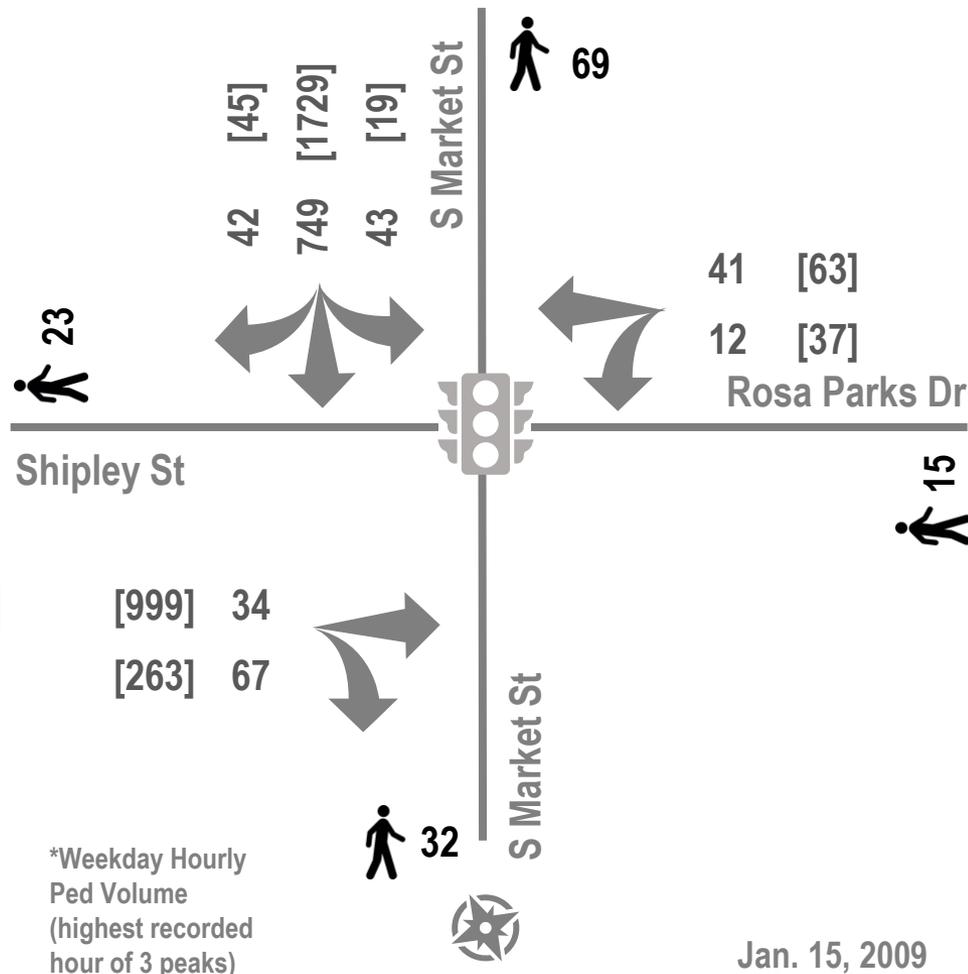


- **Zero crashes**
- Pedestrian signals on the north and east legs
- Shopping plaza located on Howard Street
- Faded crosswalk pavement markings on east leg
- During observations, the pedestrian signal on NW corner did not display the Walk symbol



7 Crashes

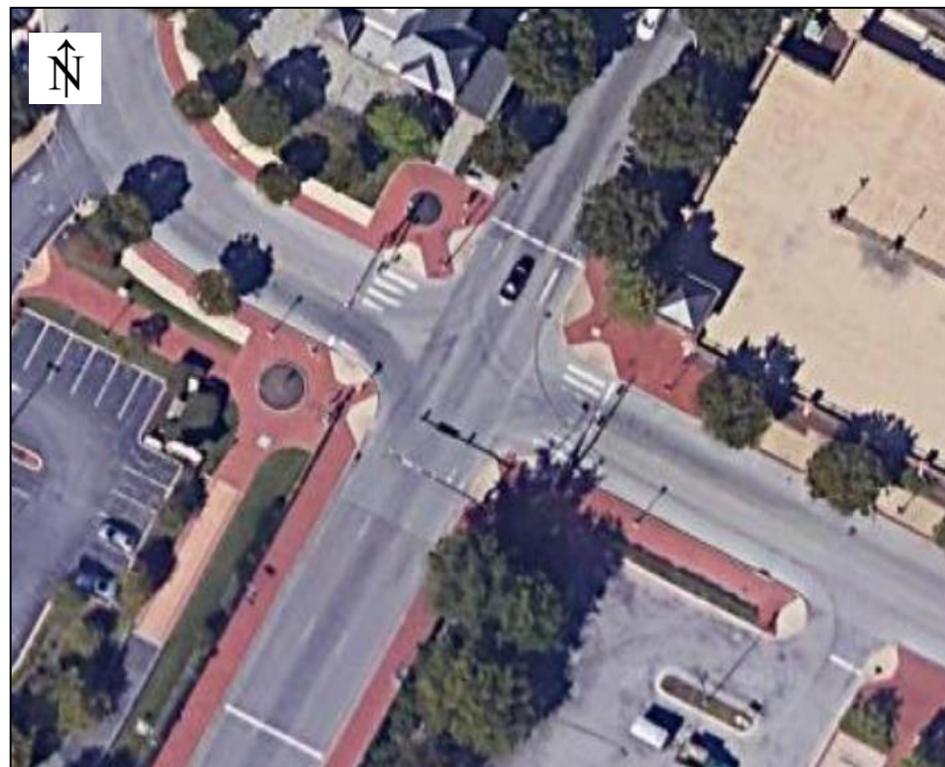
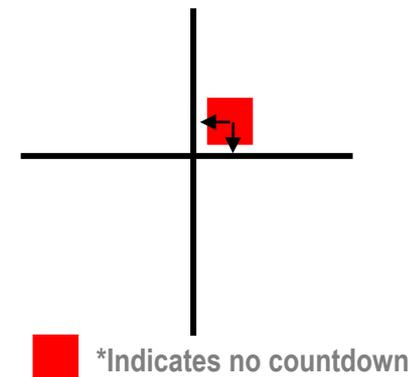
- 2 SB vehicles struck pedestrians crossing midblock (1 pedestrian was intoxicated)
- 1 EB vehicle sideswiped a pedestrian getting into parked car
- 1 EBR vehicle failed to stop and hit pedestrians in the crosswalk
- 1 SB sideswipe pushed vehicle into sidewalk and struck a pedestrian
- 1 SB vehicle failed to stop and struck a pedestrian in the crosswalk
- 1 SB vehicle with no driver (not put in park) struck a pedestrian



Jan. 15, 2009
AM [PM]

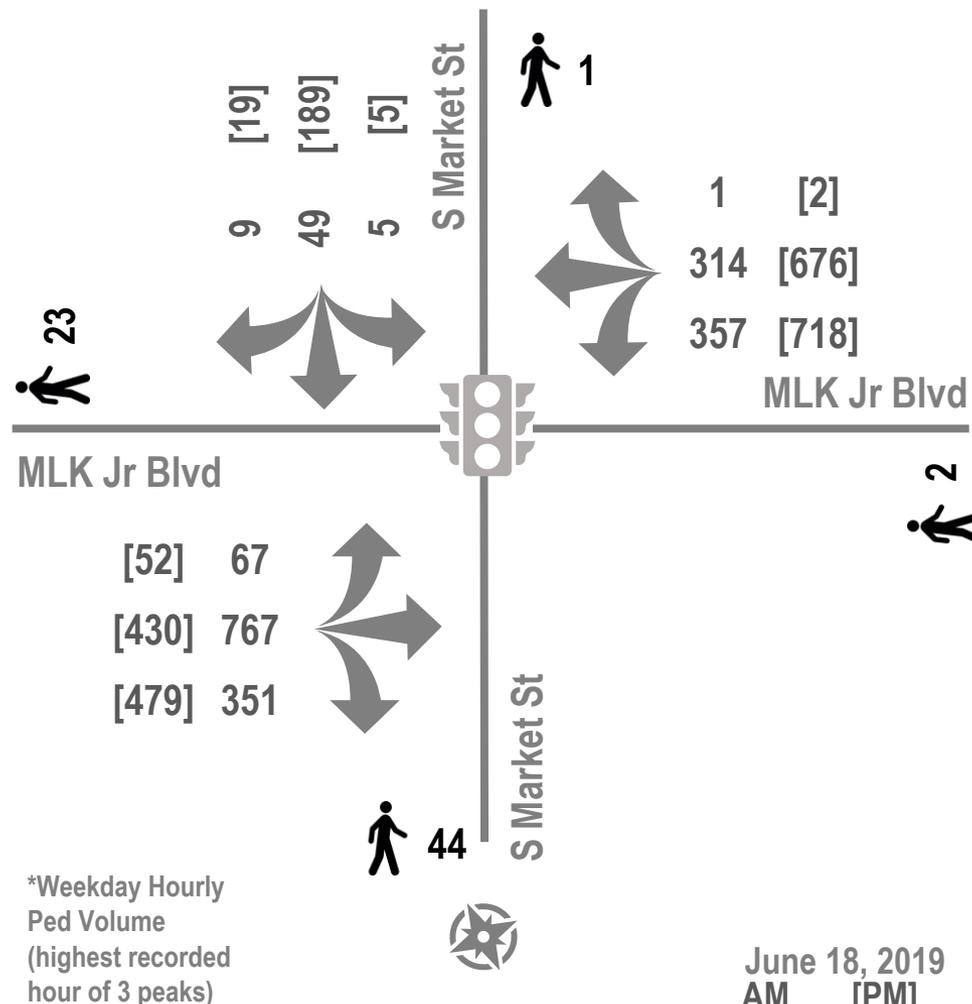
S Market Street at Rosa Parks Drive

- Pedestrian signals on all four legs
 - Faded crosswalk markings
- Bus stop on NW corner of intersection
- Adjacent to Wilmington Train Station
- Midblock pedestrians observed crossing north of the intersection
- Bus stop on NW corner of intersection
- Two existing ped heads have no countdowns



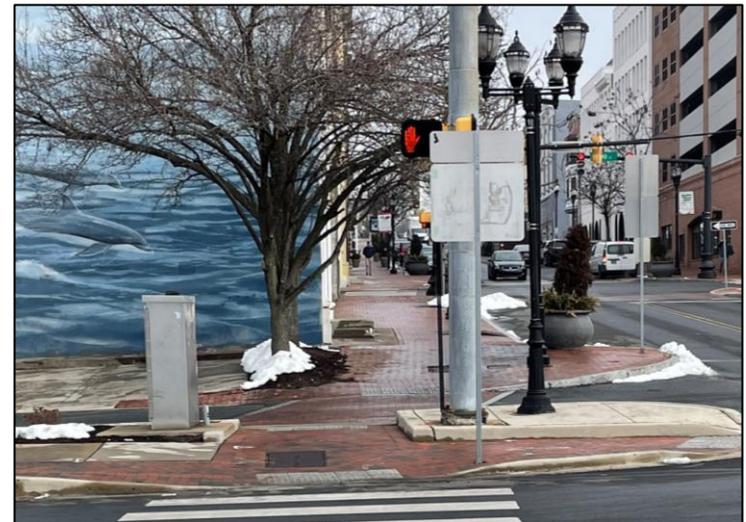
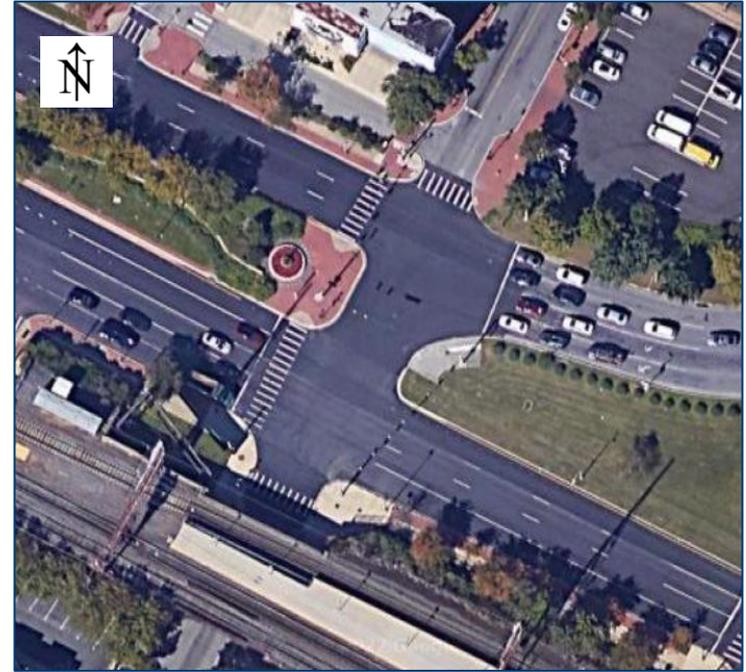
5 Crashes

- 2 EBR vehicles did not yield and struck pedestrians in crosswalk
- 1 EB vehicle hit cyclist in crosswalk on the W leg of intersection
- 1 EBR vehicle was hit by pedestrian outside of crosswalk
- 1 WBL vehicle struck a pedestrian in the crosswalk on the S leg of intersection



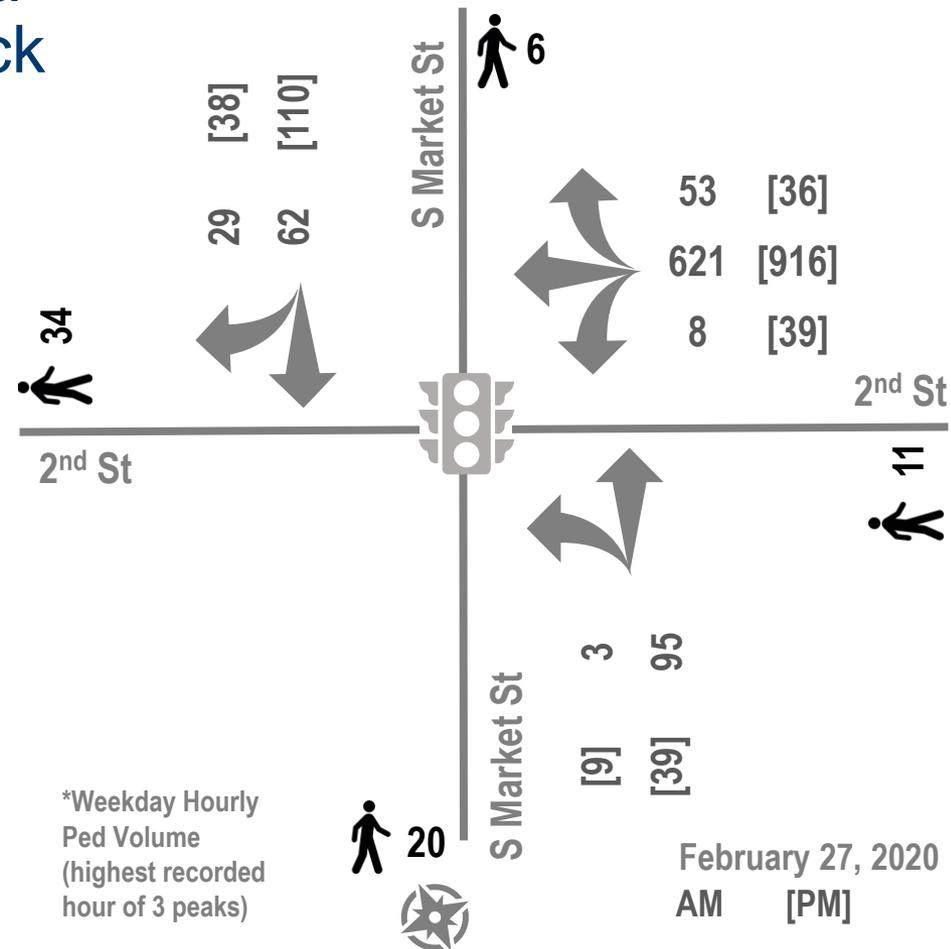
June 18, 2019
AM [PM]

- Pedestrian signals on north, south, and west legs
- Observed pedestrians on south leg crossing against the signal
- Pedestrian observed walking diagonally through crossover
- Turning Vehicles Yield to Peds sign facing EB traffic
- Ped head on NW corner is partially blocked by sign
- As part of 2018 HEP Site E, a right-turn-on-red restriction was recommended on the EB approach, along with a LPI (Leading Pedestrian Interval) for the south leg



3 crashes

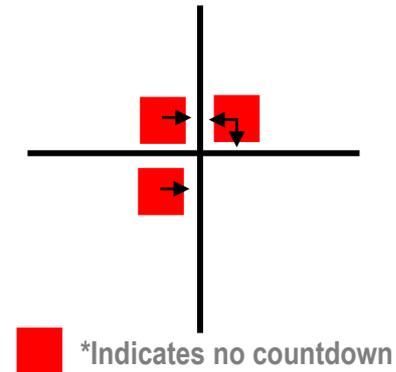
- 2 WB vehicles struck pedestrians in the crosswalk
- 1 NB vehicle reversed into a pedestrian crossing midblock



February 27, 2020
AM [PM]

S Market Street at 2nd Street

- Includes two decorative brick crosswalks and two striped crosswalks, all in good condition
- Four existing ped heads have no countdowns



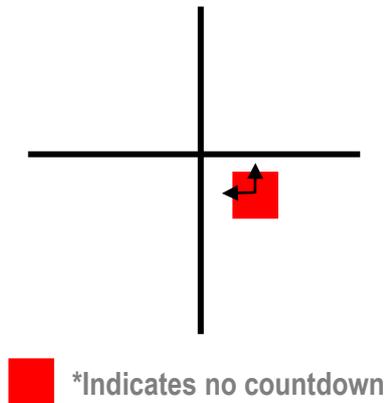
6 crashes

- 2 SBL vehicles failed to yield and struck pedestrians in the crosswalk
- 1 NB vehicle reversed into a pedestrian in the middle of the crosswalk
- 1 NB vehicle struck a pedestrian crossing midblock after parking on the E side of Market Street
- 1 SB vehicle struck a pedestrian in road that was talking to the driver of a non-contact vehicle
- 1 EB vehicle ran red light and struck a pedestrian in the crosswalk



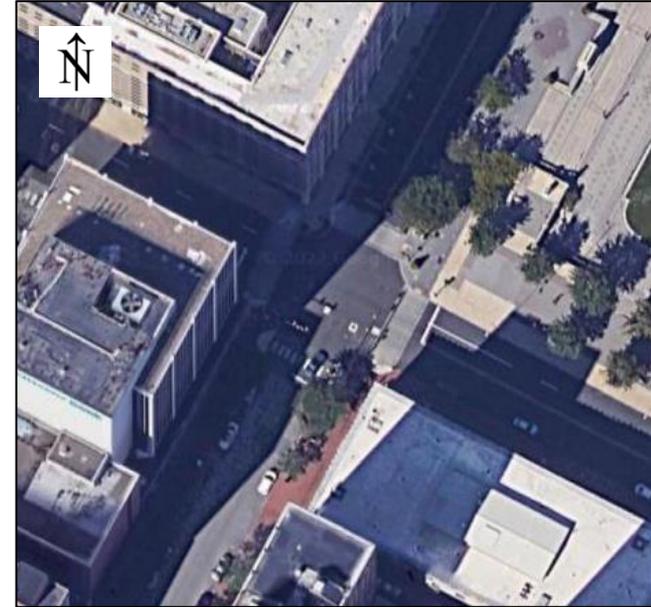
S Market Street at 4th Street

- Pedestrian signals on all four legs
- Observed pedestrians on north and south legs crossing against the signal
- Two existing ped heads have no countdowns



4 crashes

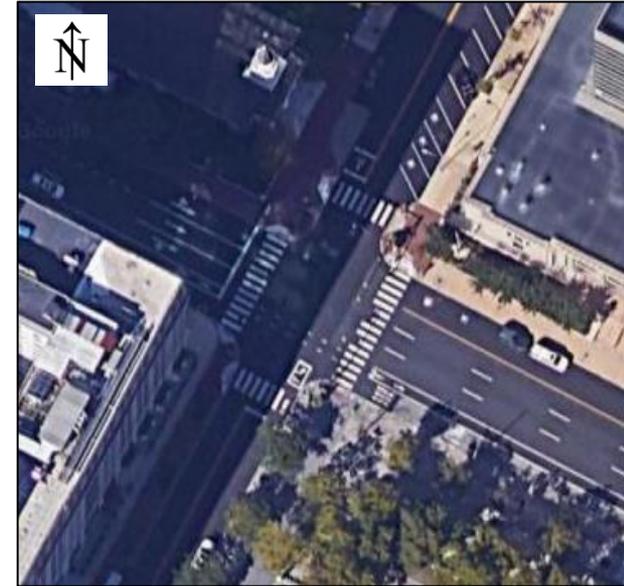
- 2 left-turning vehicles failed to yield and struck pedestrians in the crosswalk (1 NBL, 1 EBL)
- 1 NBR vehicle failed to yield when turning right on red and struck a pedestrian in the crosswalk
- 1 pedestrian walked into path of midblock NB vehicle



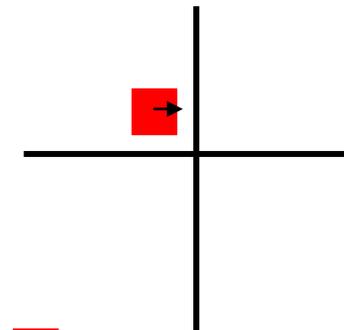
- Faded crosswalk on S leg
- Potholes in E and W leg crosswalks
- Observed many midblock crossings and pedestrians crossing against the signal

4 crashes

- 1 NB vehicle struck a pedestrian crossing midblock
- 1 SBL vehicle failed to yield and struck a cyclist in the crosswalk
- 1 EB vehicle reversed into a pedestrian while parking on W leg of intersection
- 1 EB vehicle struck a pedestrian in the crosswalk



- Observed pedestrian crossing against the signal on the E leg (not shown)



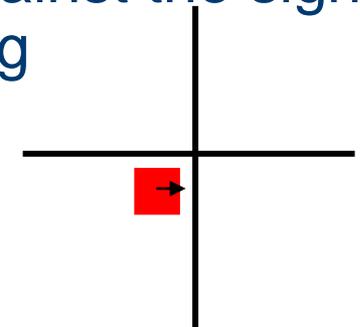
 *Indicates no countdown

3 crashes

- 1 NB vehicle struck a pedestrian crossing midblock
- 1 NBL vehicle failed to yield and struck a pedestrian in the crosswalk
- 1 WB vehicle struck a pedestrian in the crosswalk crossing against the signal



- Missing ped heads on SE corner of intersection
- Observed a pedestrian crossing against the signal on the W leg

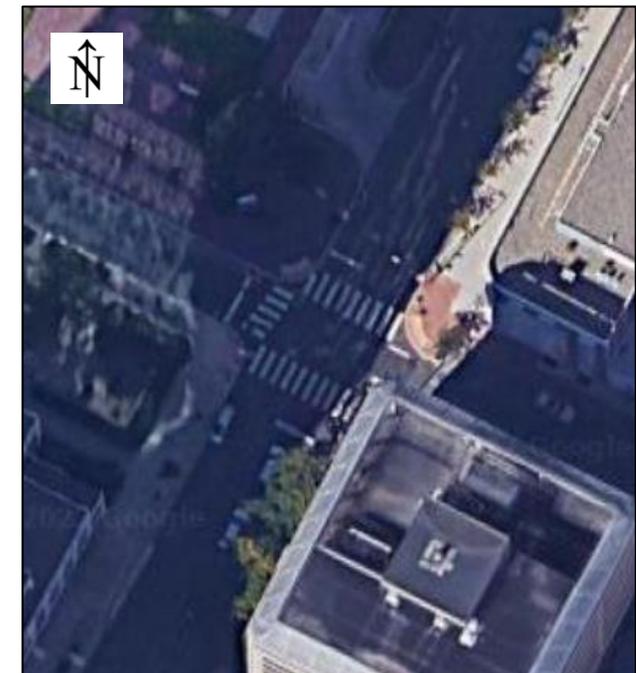
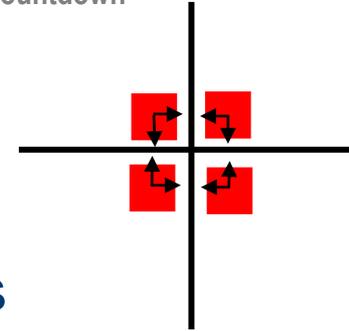


 *Indicates no countdown

S Market Street at 13th Street

- Zero crashes
- Marked crosswalks across all four legs
- Faded E leg crosswalk
- No countdown displays on any pedestrian signals
- Ped signal on SW corner is not working
- Peds were observed crossing midblock N of the intersection

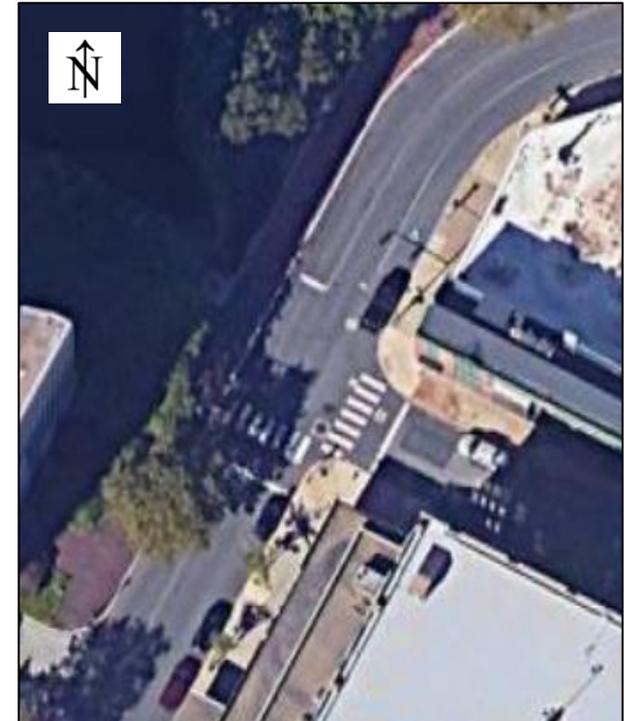
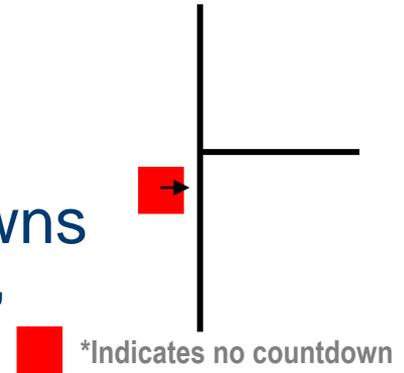
■ *Indicates no countdown



South Market Street: New Sweden Street to 16th Street

S Market Street at 14th Street

- Zero crashes
- Marked crosswalks across S and E legs
- One existing ped head does not have countdowns
- Ped signal on NE corner does not “rest in walk”
- School crossing assemblies at S leg crosswalk

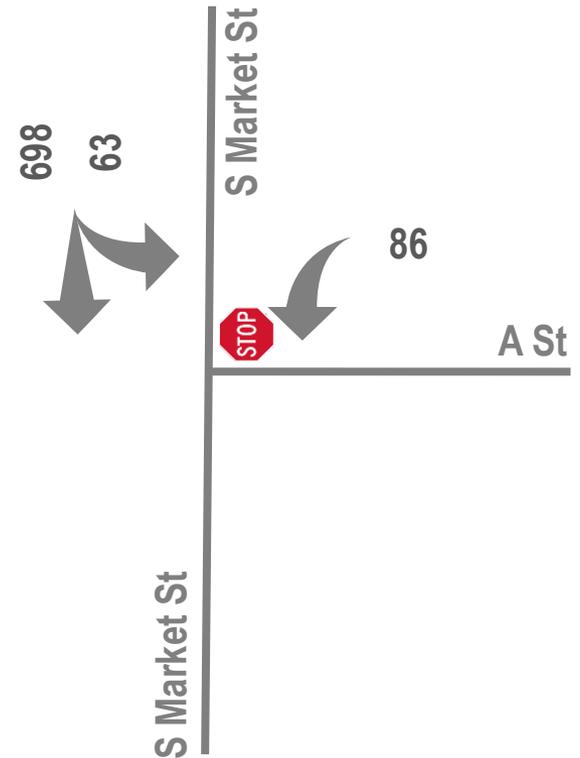
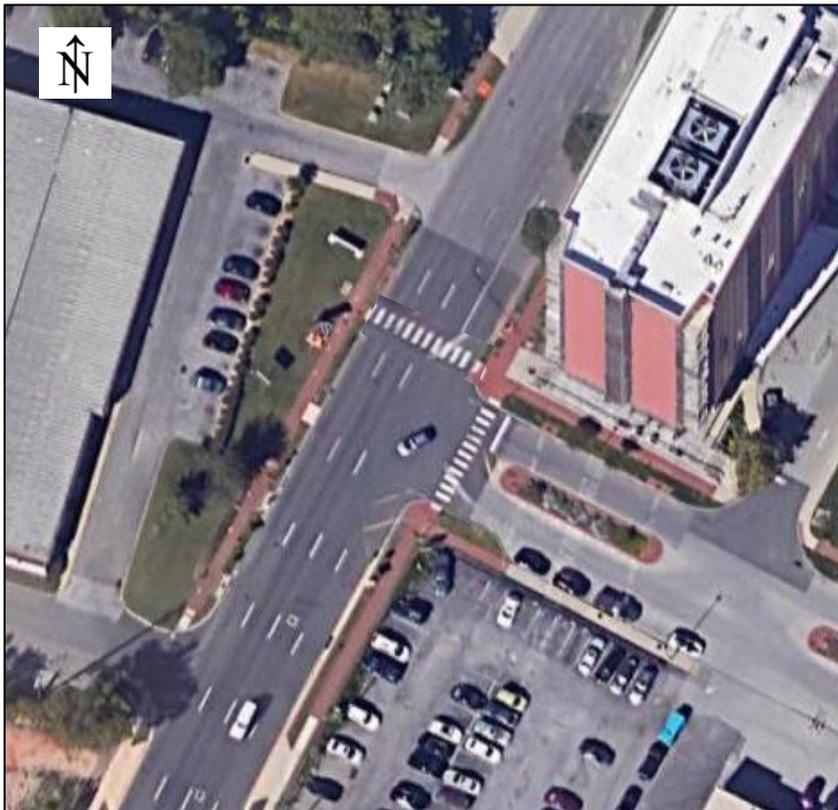


Covered in the King Street Presentation

UNSIGNALIZED INTERSECTIONS

S Market Street at A Street

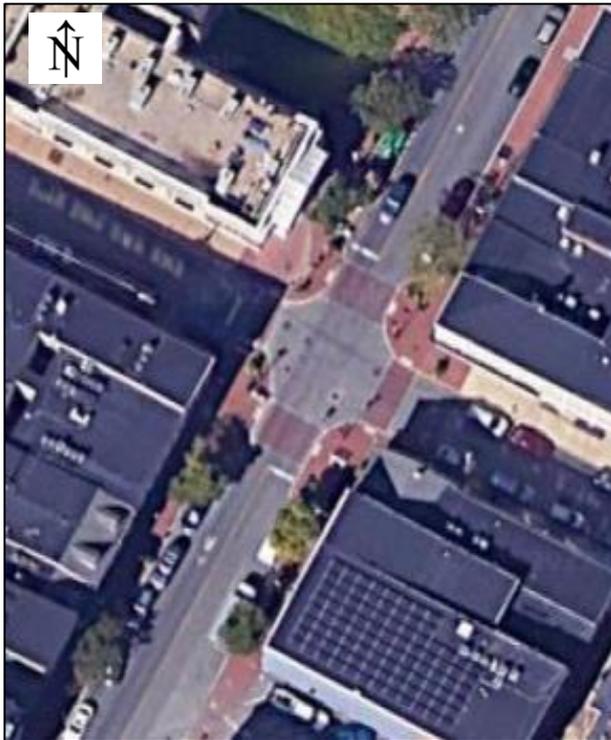
- **One crash** involving a WBL vehicle striking a pedestrian in the crosswalk
- Two existing marked crosswalks



Oct. 24, 2015
PM

S Market Street at 3rd Street

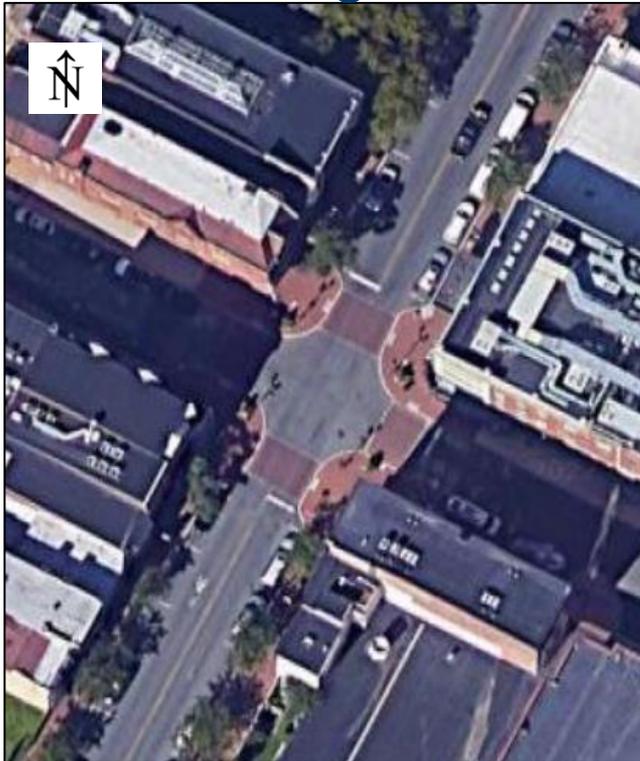
- Zero crashes
- Four existing decorative brick crosswalks
- 3rd Street is one-way
- Bus stop located on SE corner
- STOP signs on north, south, and west legs



South Market Street: New Sweden Street to 16th Street

S Market Street at 5th Street

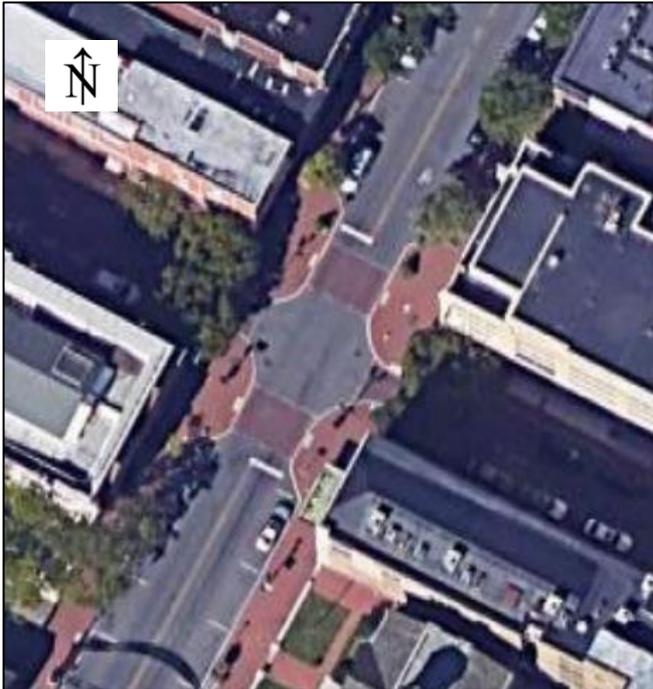
- **One crash** involving a SBR vehicle failing to yield and striking a pedestrian in the crosswalk
- Four existing decorative brick crosswalks
- 5th Street is one-way
- STOP signs on north, south, and east legs



South Market Street: New Sweden Street to 16th Street

3 crashes

- 2 NB vehicles struck pedestrians crossing midblock
- 1 EB vehicle failed to yield and struck a pedestrian in the crosswalk
- Four existing decorative brick crosswalks
- 6th Street is one-way
- STOP signs on north, south, and west legs



3 crashes

- 2 NB vehicle reversed into pedestrians crossing midblock
- 1 NB vehicle struck a pedestrian crossing midblock
- Four existing decorative brick crosswalks
- Bus stop located on SE corner
- STOP signs on north, south, and west legs



South Market Street: New Sweden Street to 16th Street

6 crashes

- 2 NB vehicles failed to yield and struck pedestrians in the crosswalk
- 1 NB vehicle struck a pedestrian standing next to parked vehicle
- 1 SB vehicle struck a motorist on a scooter making a midblock NBL
- 1 WB vehicle failed to yield and struck a pedestrian in the crosswalk
- 1 crash with unclear description



S Market Street at 8th Street

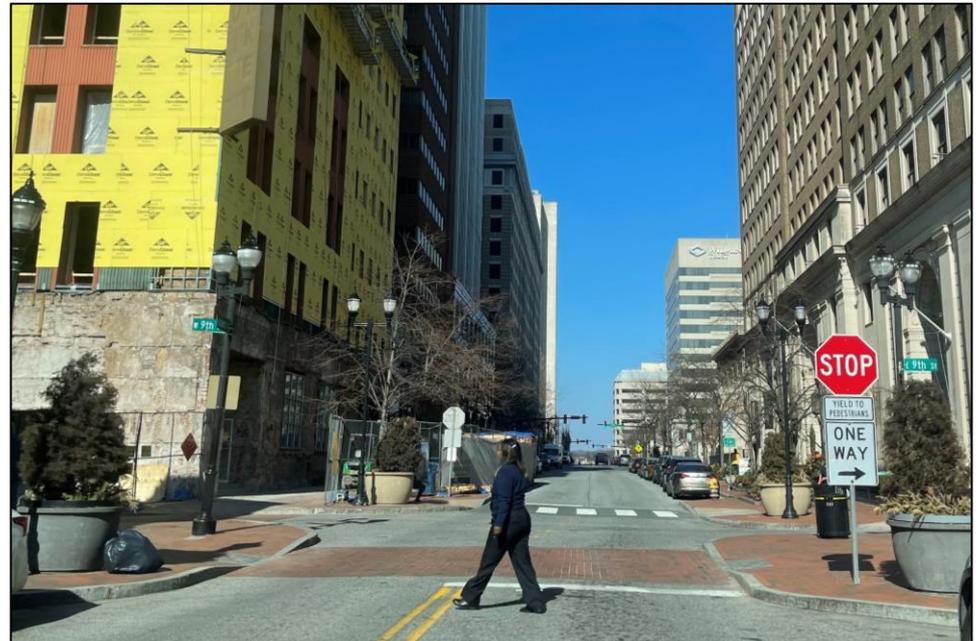
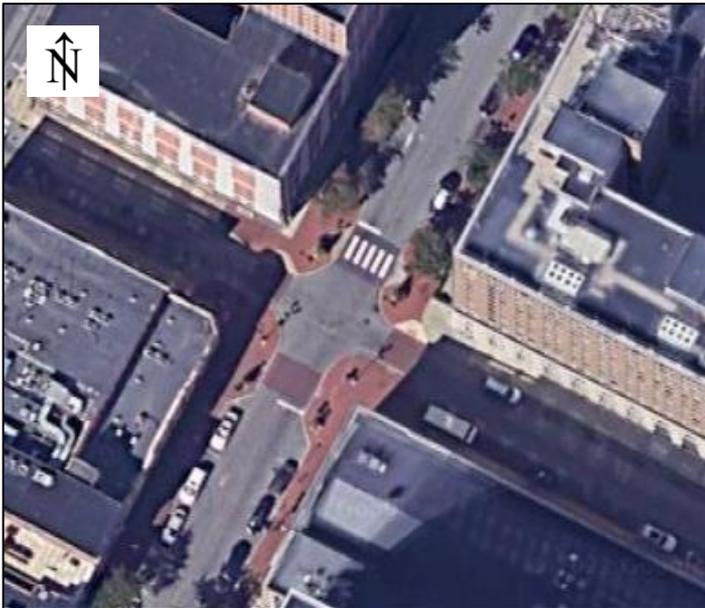
- Observed many peds crossing on each leg
- Observed paratransit bus stop in SB lane
- STOP signs on north, south, and east legs
- “Yield to Pedestrians” plaque on NB and SB STOP sign assemblies
- Four existing decorative brick crosswalks
- W leg crosswalk is in poor shape



South Market Street: New Sweden Street to 16th Street

4 crashes

- 3 vehicles failed to yield and struck pedestrians in the crosswalk (1 NB, 1 SB, 1 EB)
- 1 NB vehicle struck a pedestrian crossing midblock
- YIELD TO PEDESTRIANS plaque on NB STOP sign assembly
- Bus stop located on NW corner
- STOP signs on north, south, and west legs



POTENTIAL RECOMMENDATIONS AND NEXT STEPS

- Install missing pedestrian signal
 - S Market Street at 12th Street SE corner
- Repair decorative brick crosswalk on the W leg of S Market Street at 10th Street
- Repair broken pedestrian signal on the SW corner of S Market Street at 13th Street
- Switch controller setting to “Rest in Walk” on the NE corner pedestrian signal at S Market Street and 14th Street
- Consider a Leading Pedestrian Interval (LPI) for the east leg crosswalk at S market Street at 4th Street due to SBL pedestrian crashes

- Install TURNING VEHICLE YIELD TO PED signs (R10-15) at signalized intersections where RTOR / LTOR is permitted and/or where left turns are permitted
- Upgrade existing pedestrian heads with no countdowns to include countdowns where missing
 - S Market Street at Howard Street (2)
 - S Market Street at 2nd Street (4)
 - S Market Street at 4th Street (2)
 - S Market Street at 11th Street (1)
 - S Market Street at 12th Street (1)
 - S Market Street at 13th Street (8)
 - S Market Street at 14th Street (1)
- Refresh faded crosswalks
 - S Market Street at Howard Street east leg
 - S Market Street at 10th Street south leg
 - S Market Street at 13th Street east leg
- Consider lighting improvements at deficient locations



- Install pedestrian crossing warning signage at unsignalized intersections
- Install ALL WAY (R1-3P) plaques beneath STOP signs at the following unsignalized intersections
 - S Market Street at 3rd Street
 - S Market Street at 6th Street
 - S Market Street at 8th Street
 - S Market Street at 9th Street
- Replace 4-WAY plaques on STOP assemblies with ALL WAY (R1-3P) plaques at S Market Street at 5th Street
- Replace 3-WAY plaques on STOP assemblies with ALL WAY (R1-3P) plaques at S Market Street at 7th Street
- Consider bumpouts at intersections between 10th Street and 15th Street to reduce crosswalk lengths





Thank you!

**Questions
& Answers**

